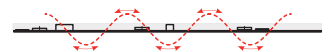


Version: A1.8

## Features

- Built-in IC design, less components than similar products, more concise and beautiful.
- Flexible and cuttable each LED, good stability and reliability performance.
- To achieve rich light changes like dreaming color chasing effects like magic with external controller.
- Do not support PWM dimming. Recommend controller: SP105E/MR-502.

**Bending radius:** Rmin=20mm



## Application

Suitable for indoor and outdoor decoration, showcase lighting, contour lighting, etc

## Installation

Fix by screws or 3M self adhesive tape



## Specification

| Model No.         | Light Color | Color Temperature/Wavelength(K/nm) | Beam Angle | Typical Luminous Flux value(lm/m) | Ra | Efficacy (lm/W) | Voltage (V DC) | Power (W/m) |
|-------------------|-------------|------------------------------------|------------|-----------------------------------|----|-----------------|----------------|-------------|
| DN-N5-60-12-RGB-D | R           | 615-630                            | 120°       | 42                                | -- | 4.8             | 12             | 8.64        |
|                   | G           | 515-530                            |            | 111                               |    | 12.8            |                |             |
|                   | B           | 460-470                            |            | 37                                |    | 4.3             |                |             |
|                   | R+G+B       | 100000                             |            | 185                               |    | 21.5            |                |             |

## Temperature-Related Parameters(Normal Working)

| Model No.         | Power(W/m) | No Brightness Difference MAX(m) | UL Max Run (single feed)(m) | T <sub>A</sub> (°C ) | Operating Temp MAXT <sub>C</sub> (°C ) |
|-------------------|------------|---------------------------------|-----------------------------|----------------------|----------------------------------------|
| DN-N5-60-12-RGB-D | 8.64       | 5                               | 5.5                         | -20~+60°C            | 78                                     |

## Other Parameters

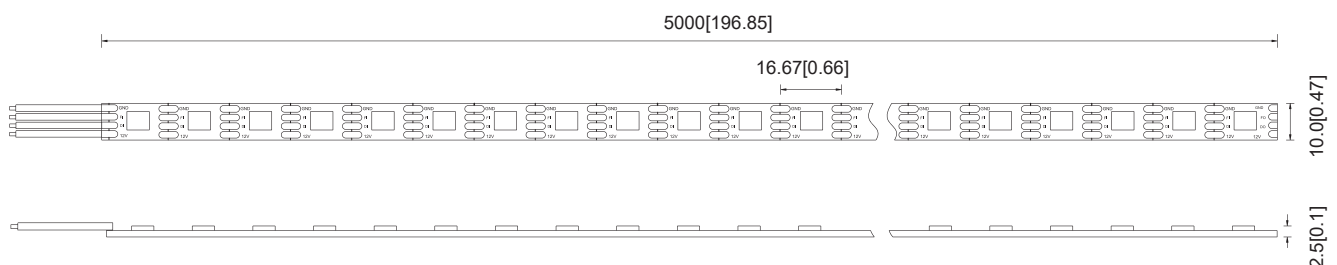
| Model No.         | LED Quantity(pcs/m) | Min Cuttable Length(mm) | Storage Temperature(°C ) |
|-------------------|---------------------|-------------------------|--------------------------|
| DN-N5-60-12-RGB-D | 60                  | 16.67                   | -20~+70°C                |

## NOTE:

1. Test environment temperature : 25±2°C.
2. Figures above are typical figures. Actual figures could be different with typical figures, and the data is subject to change without notice.
3. The luminous flux is tested with single color light on.
4. Different color temperature will make luminous flux different.
5. UL max run is in single feed.
6. The luminous flux and power tolerance within ±10%.

## Profile Drawings

Unit:mm[inch]



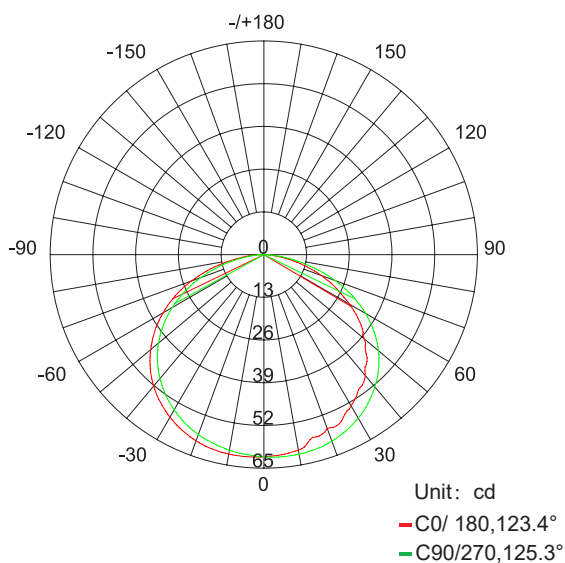
NOTE:For detailed drawing, please consult sales rep.



## Operating Length VS. Electrical Parameters

| DN-N5-60-12-RGB-D                 | Operating Length(m) |             |             |             |             |
|-----------------------------------|---------------------|-------------|-------------|-------------|-------------|
| Parameters                        | 1                   | 2           | 3           | 4           | 5           |
| Operating Voltage (DC V)          | 12.0                | 12.0        | 12.0        | 12.0        | 12.0        |
| Total Current(A)                  | 0.73                | 1.42        | 2.14        | 2.77        | 3.43        |
| Total Power(W)                    | 8.76                | 17.04       | 25.68       | 33.24       | 41.16       |
| Head voltage(V)                   | 11.95               | 11.90       | 11.88       | 11.85       | 11.83       |
| Tail voltage(V)                   | 11.87               | 11.54       | 11.12       | 10.73       | 10.18       |
| Head Current(mA)                  | 12.00               | 12.00       | 12.00       | 12.00       | 12.00       |
| Tail Current(mA)                  | 12.00               | 12.00       | 12.00       | 12.00       | 12.00       |
| Head-to-tail Voltage Drop Rate(%) | 0.08-0.67           | 0.36-3.03   | 0.76-6.4    | 1.12-9.45   | 1.65-13.95  |
| Head-to-tail Current Drop Rate(%) | 0                   | 0           | 0           | 0           | 0           |
| Single/Double feed                | Single Feed         | Single Feed | Single Feed | Single Feed | Single Feed |

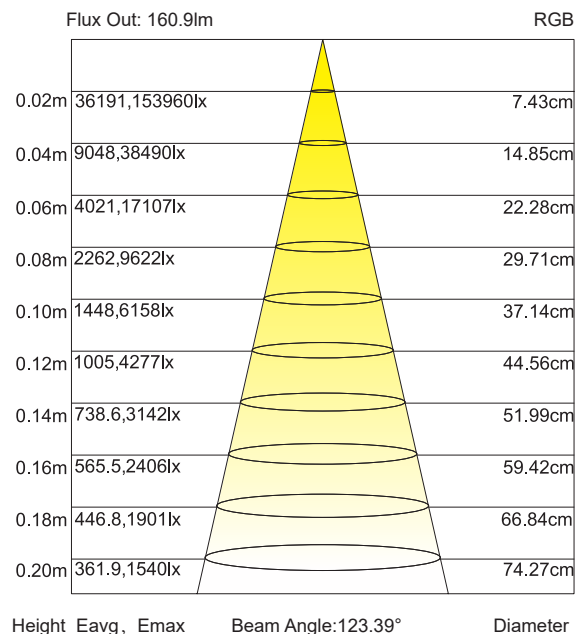
Luminous Intensity Distribution Diagram



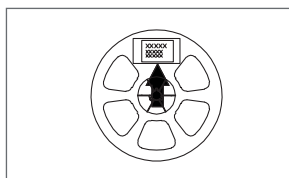
AVERAGE BEAM ANGLE(50%): 124.3°

Note:for other data,please consult sale rep.

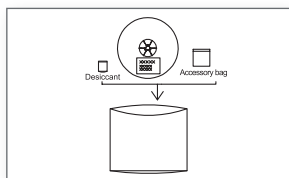
Average Illumination



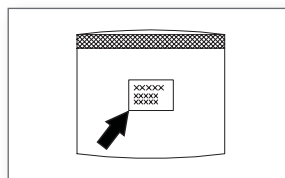
## packing



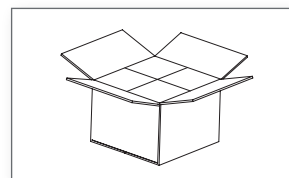
Label the reel;



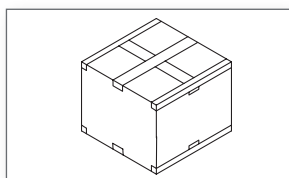
Put reel, accessory bag and desiccant together into static shielding bag;



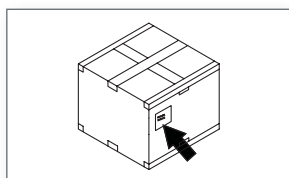
Seal and label the static shielding bag;



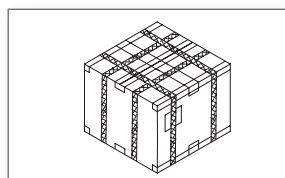
Put the packed static shielding bag into carton box;



Seal the carton box;



Label the box;



Use packing belt to pack. Add edge protectors if necessary.

### Packaging information

| Model No.         | Product Size<br>L*W(mm) | Carton Size(mm) | Meter/Reel | Reel/Carton | Net Weight(kg) | Gross Weight(kg) |
|-------------------|-------------------------|-----------------|------------|-------------|----------------|------------------|
| DN-N5-60-12-RGB-D | 5000*10                 | 550*400*340     | 5          | 100         | 16.85(1±10%)   | 18.15(1±10%)     |

#### Note:

Every 5m for a reel, one reel for a static shielding bag.

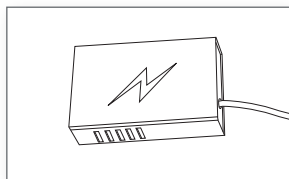
The above quantity and weight are only for the illustrated packaging method. There will be differences in the quantity and weight with other packaging methods.

## Installation

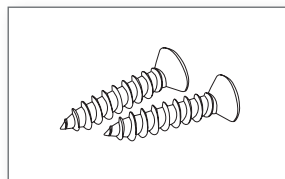
### 1.Products and Tools



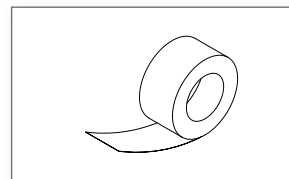
DN-N5-XXX-XX-RGB-D



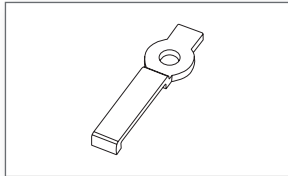
LED power supply



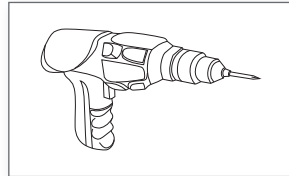
Self-tapping screw



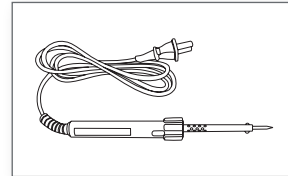
Insulation tape



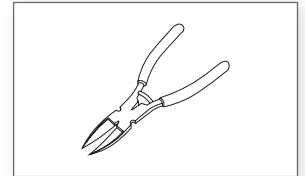
Clips



Electric Iron



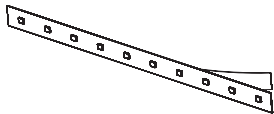
Electric drill



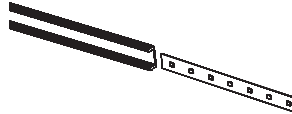
Diagonal Pliers

## 2.Installation Methods and Steps

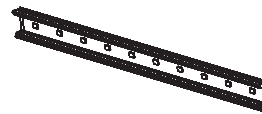
### Aluminum channel installation



Peel away the self adhesive tape on the back of strip.



Cut off the excess part based on the installation position.

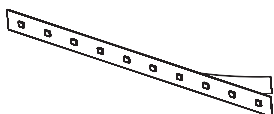


Evenly arrange the strips with appropriate space in the track.

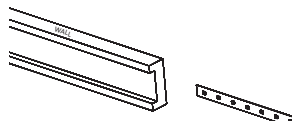


Install the cover and end cap.

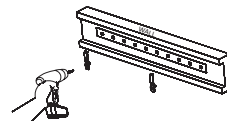
### Covered channel installation



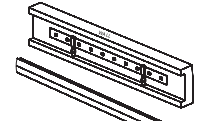
Peel away the self adhesive tape on the back of strip.



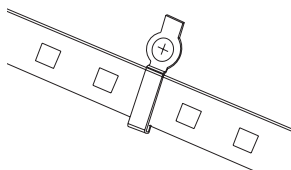
Cut off the excess part based on the installation position.



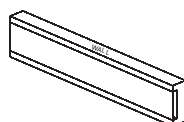
Evenly arrange the strips with appropriate space in the track and fix them with clips.



Install the cover and end cap.



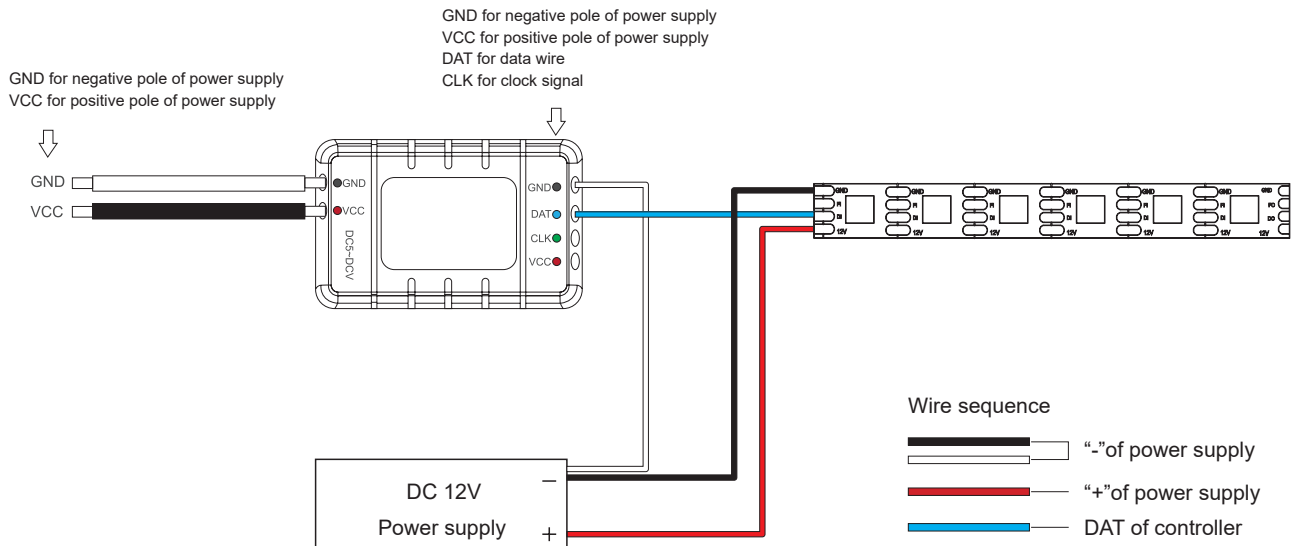
Clip installation as the figure show



Finished



## Controller Wiring Diagram



### Note:

- 1.The controller is SP105E.
- 2.Support Bluetooth and mobile APP control
- 3.Bluetooth remote control distance is 20 m
- 4.SP105E can drive up to 2048 pixels.
- 5.The working voltage of the controller ranges from DC 5V to DC 24V.
- 6.When connecting the LED strip and the controller, the FI socket can be left unconnected.
- 7.SP105E is typically recommended for use with a LED strip load of less than 50 meters.
- 8.The communication protocol and compatible IC for this product are the UCS2904/4-channel SK6812. This product uses a singlewire data communication and adopts the SPI protocol.



### Attentions before installation

- Before installation, check that the product parameters are consistent with the requirements (Seeing product specifications or product labels)
- Load voltage, current, power and power supply should be matched with the product.
- Follow the instructions of wiring diagram (first connect the load and then the power supply) to avoid short circuit.
- Make sure the correct connection of positive and negative poles between products and power supply. Otherwise, the light will not be on.
- Make sure the power cord firmly screwed into the terminal and it should not be pulled out by hands.
- The terminal should have insulation, waterproof and anti-corrosive treatment.
- **If the working length exceeded the max run length, make sure to have extra power supply.**
- **If it needs higher current of a LED, make sure having extra cooling.**

### Common Faults and Troubleshoot

| Quick Guide                                         |                                                                                          |                                                                                                                                  |
|-----------------------------------------------------|------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------|
| Problems                                            | Reasons                                                                                  | Solutions                                                                                                                        |
| All LEDs can not light on.                          | No electric supply.                                                                      | Fix the short circuit problem.                                                                                                   |
|                                                     | Automatic power protection from the open or short circuit in output of the power supply. |                                                                                                                                  |
|                                                     | Wrong connection of power supply.                                                        |                                                                                                                                  |
| LEDs can not light on partly.                       | Some switching mode power supplies are not powered.                                      | Correctly connection.                                                                                                            |
|                                                     | Power supply line error.                                                                 |                                                                                                                                  |
|                                                     | Mistaken wire connection of some of products                                             |                                                                                                                                  |
| Brightness of LED is inconsistent tor insufficient. | Power overloaded.                                                                        | Replace with more powerful power.                                                                                                |
|                                                     | Power supply circuit excessive consumption.                                              | Make sure the working voltage of the product within $\pm 5\%$ of standard voltage, or keep balance by circuit power consumption. |
|                                                     | Excessive quantities in series connection of the product                                 | Reduce the quantities of the product in series connection to meet requirement.                                                   |
| LED flicker.                                        | Connection point fault.                                                                  | Remove bad connection point.                                                                                                     |
|                                                     | Switching power supply failure.                                                          | Replace a new power supply.                                                                                                      |
|                                                     | Wrong Installation or use of products                                                    | Please follow the instructions                                                                                                   |

### Warning

- Do not disassemble or retrofit the light. Do not touch the surface of the light with a sharp object.
- Do not do live-line working during installation, especially for high voltage product.
- Do not use any organic chemical solvents.
- Use neutral glass adhesive to fix this product and it needs to be dried 24 hours in the open environment after operation.
- Treat the ends and the circuit connection points that are not connected to the main line with insulation, waterproof, and anti-corrosion in the installation.
- Use 18AWG (0.75mm<sup>2</sup> cross-sectional area) or thicker core wire to avoid adverse consequences caused by overheating, if the power cable need to lengthen.
- Make sure the input voltage meets the requirements and lines are connected correctly before lighting on.
- This product is for signage, and do not use as general lighting.
- Series connection within the max run.
- The length of the power cable between the power supply and the led strip should not exceed 2 meters. Otherwise, large circuit loss will lead to inconsistent brightness.
- Installation, maintenance and repair should be operated by a qualified technician.

### Statements and Recycling

#### Statements:

- Repair should be operated by a qualified technician, if the external circuit or main line of this product is damaged.
- The parameters given in this manual are typical values and for reference only.
- All illustrations and drawings in this manual are for reference.
- This product is subject to change without notice.

#### Recycling:

- LED lighting products belongs to electronic products, please do recycling treatment according to the relevant WEEE directives.